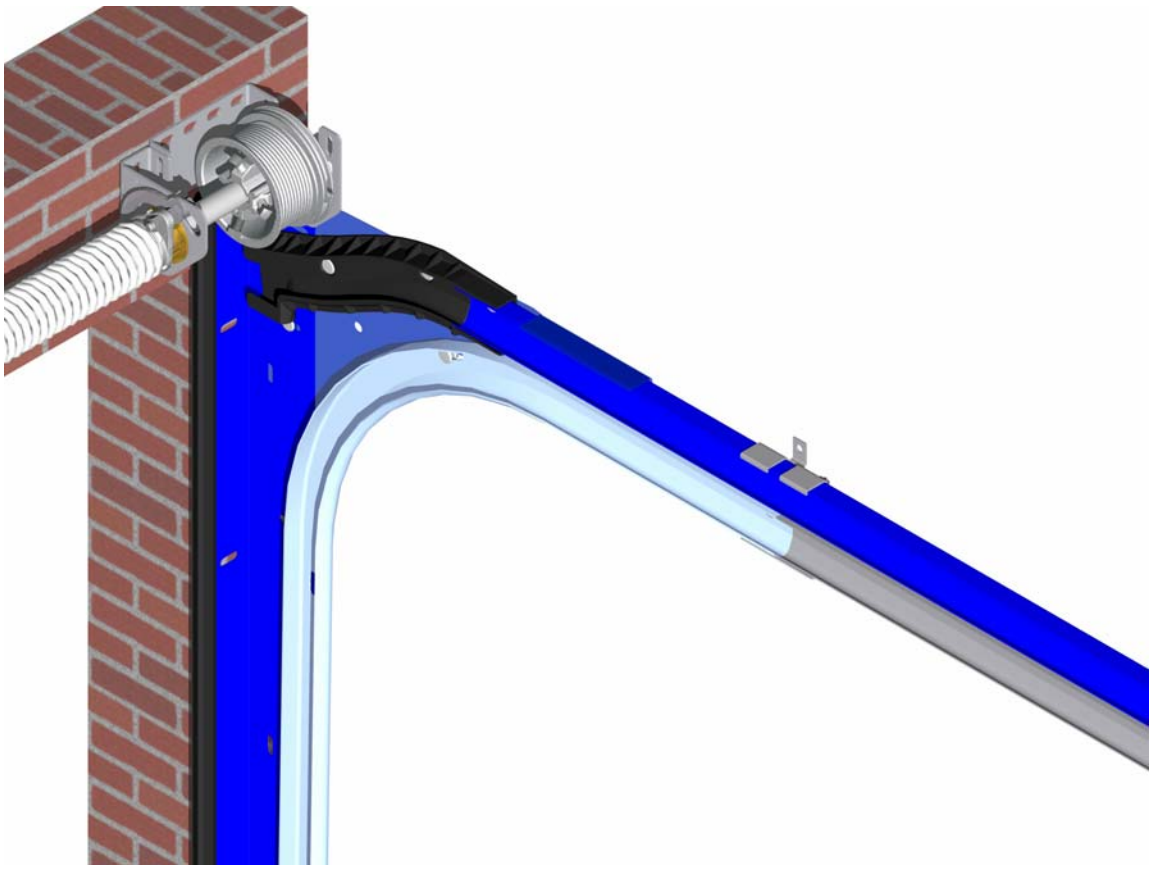
DOCO®
INTERNATIONAL
part of your door



Manual

Sectional door with front springs (RES STF)
Conform TÜV / CE EN 13241-1

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DOCO International BV
2006

EN

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1. Symbols and warning signs

General symbol for DANGER!!
Symbol for ATTENTION!!
Carefully read the text with this symbol!!

Symbol: Risk of physical injury!!
Carefully read the text with this symbol!!

Use safety gloves

Use Face protection

2. General warnings

This manual has been prepared for use by qualified personnel and therefore not by trainees or “do it yourselfers”
In case of doubt about the assembly and/or maintenance, please contact DOCO International.

To avoid severe personal injury, carefully read and observe all indications and warnings in this manual.

- This manual describes the assembly and disassembly of residential set of fittings ST ; this may be supplemented by other manuals, for instance the door operator manual (if applicable.)
- Your set of fittings has been designed according to the latest European standards; however you have to check yourself whether this standard corresponds with the local national standard.
- Adding or leaving out parts can affect the working and therefore the safety of the eventual sectional door and is therefore strongly discouraged!
- All indications concerning the assembly the mounting right / left are always viewed from the assembly location, that is from the inside to the outside!
- All measures are in millimetres unless otherwise specified.
- Check after the assembly whether the CE marking has been completed and attached.
- Keep this manual in a safe place.
- Subject to technical changes, without written notice.

2.1 Safety requirements for assembly and first use.

- The garage door may only be mounted, connected and put into operation by qualified personnel.
- Make sure that the power is switched off and remains switched off while electrical work is carried out!
- Never bridge safety devices !
- Some parts contain sharp edges: use protective gloves.
- Never use the sectional door in case or visual damage on the safety devices.
- When performing assembly/maintenance, always wear at least gloves and safety boots and during drilling wear safety goggles!
- Make sure that you can always perform your work in a stable environment.
- Secure the assembly/maintenance site with safety ribbon to keep others (children!) at a distance.
- Maintenance must only be performed by a qualified company and/or qualified personnel.
- Make sure there is enough light.
- Only use appropriate tools, especially when tensioning the torsion springs.

2.2 Guarantee and liability

Unprofessional assembly, any changes made to the garage door or changes in the door operator that do not comply with this manual will annul the guarantee and liability.
This also applies to damage caused by incorrect operation, failure to observe the instructions in this manual and/or poor maintenance or care.

3. Directives, applications and limitations

Doco garage doors comply with the following Directives:

- EMC Directive*
- LVD Directive*
- Machine Directive*
- CPD Directive*

(* E driven doors).

DOCO International developed this hardware set, which is intended for mounting in residential garages:

- Max. width 5000 mm
- Max height 2580 mm
- Weight door panel: max 162 kg
- Noise production: : <70 dBa
- Temperature range: –20º to + 40ºC
- Service-life 25,000 cycles
- CE approved according to SP certificate for use with the correct DOCO parts (see parts lists SET 1 to 4)

DOCO International had the “Product Test“ (ITT Initial Type testing) of this set of fittings carried out by the institute SP in Sweden, known as Notified Body No. 0402.
Documents of this “ITT” are available from DOCO upon request.

The person or the company installing this door must thoroughly check if the door can be operated safely in combination with the selected E-drive and panel, see “Product test report (ITT Report)”; Annex A and B.

This “ITT” does NOT include a pass door. If you want to install a pass door, a separate Product Test must be carried out. This is the responsibility of the garage door manufacturer.

If parts are mounted that are not mentioned or if other parts are used that are not listed in this manual, the CE certification will be invalid!

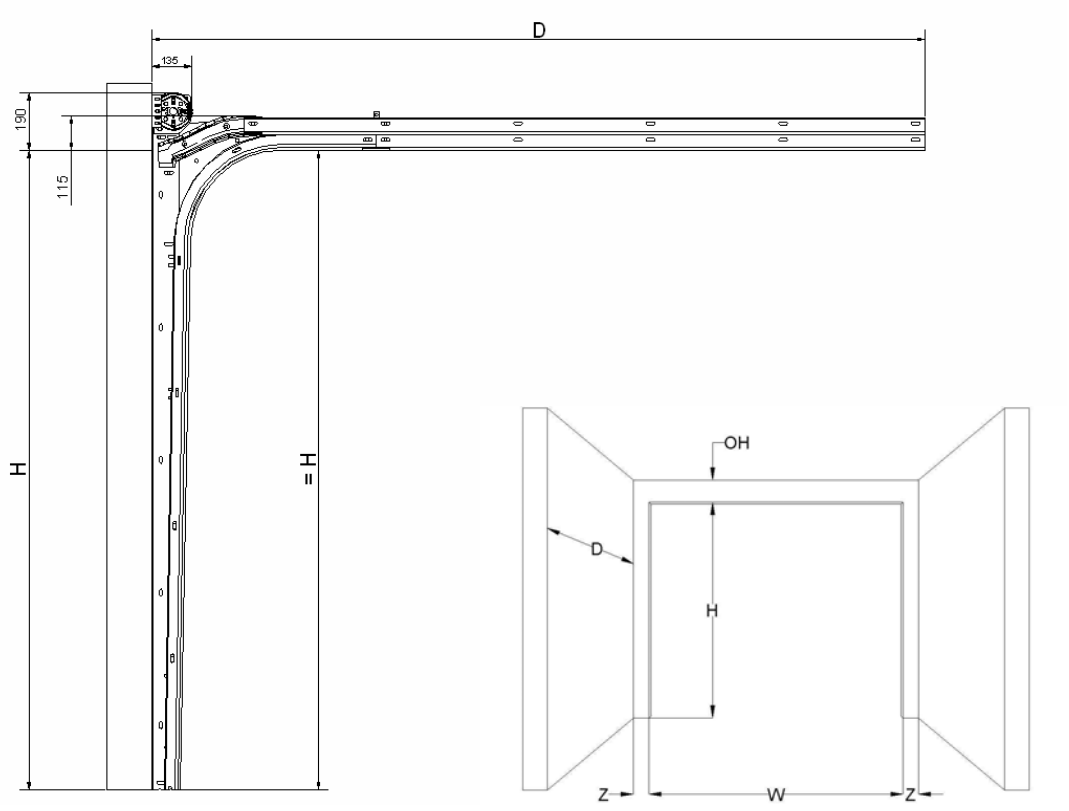
7 Assembly

This set of fittings does not include the mounting material needed to mount this rail set on walls and/or the ceiling! It is the responsibility of the installer to check whether the construction of the mounting place is strong enough to support this garage door. The installer is also responsible for choosing the appropriate fixing materials for the foundation (stone, concrete, steel, wood).

4.1. Preparation of the assembly

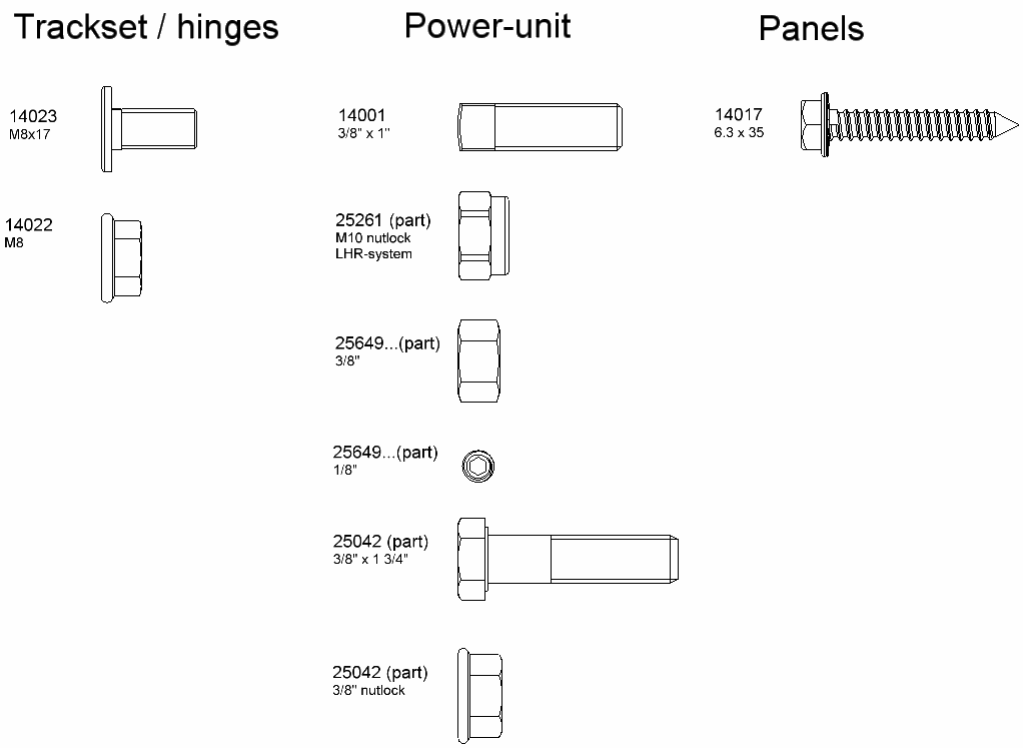
- Check if the place where you want to mount the rail set is level and if the construction of the mounting place is strong enough to support this rail set. If not: reinforce
- Before you start the assembly, check if the garage has the required dimensions (*figure 1).*

W = Clear width
H = Clear height
OH = Upper space
Z = Lateral space
D = Built-in depth

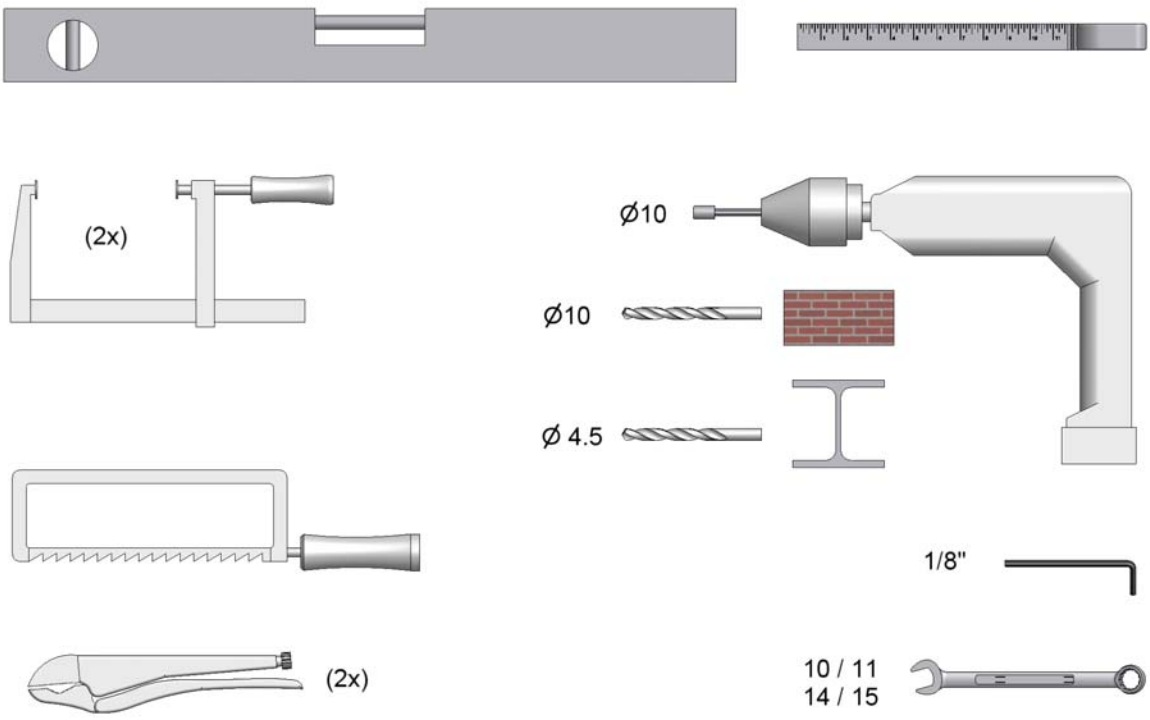


System STF	OH = 190				
Angle	Max Height (H)	Z	D (21182-L / 21226-L)	D (21226-L / 21270-L)	D (21270-L / 21340-L)
23699	2140	80	2600	3040	3480
23698	2580	80		3040	3480

4.2 Mounting materials



4.3 Tools



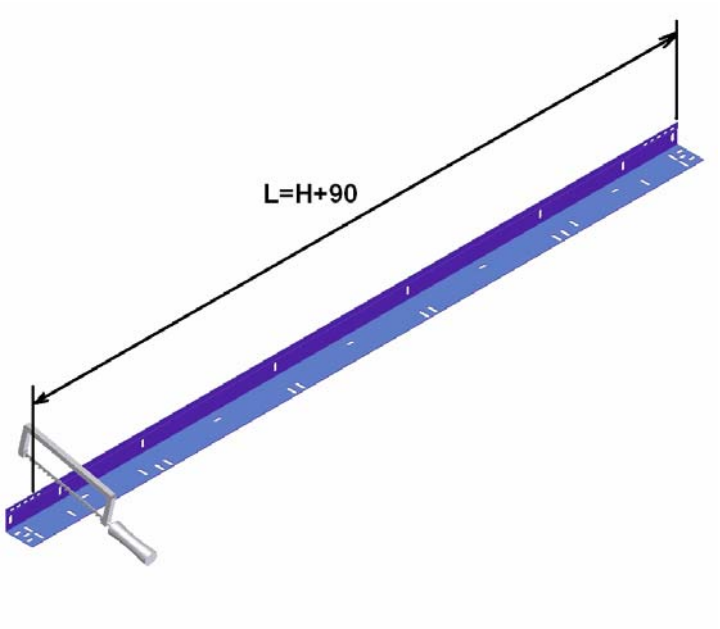
4.4 Toque instructions

Omschrijving	Bevestigingsmateriaal	Aantal	Vastzetmoment (Nm)
Angle (23699/23698) with coverplate (24714)	14022 14023	4x 4x	20 20
Coverplate (24714)) with short horn (22979)	14022 14023	4x 4x	10 10
Curve (22301-L/22251-L) with angle (23699/23698)	14022 14023	20x 20x	20 20
J track (21182-L / 21226-L / 21270-L /21340-L) with connection plate (24604)	14022 14023	8x 8x	20 20
J track (21182-L / 21226-L / 21270-L /21340-L) with connection plate (24809)	14022 14023	6x 6x	20 20
J track (21182-L / 21226-L / 21270-L /21340-L) with short horn (22979)	14022 14023	2x 2x	10 10
J trackl (21182-L/21226-L/21270-L) with angle (24621)	14022 14023	2x 2x	20 20
Angle (24621) with mounting plate (24620)	14022 14023	2x 2x	20 20
End bearing plate (13022) and spring break device (25649…)	14022 14023	4x 4x	20 20
End bearing plate (13018 / 13022) and bearing supports (13026/27)	14022 14023	4x 4x	15 15
Spring break device (25649…) and spring plug (12002 S /12003 S)	Moer 3/8"	4x	15
Spring break device (25649…) and ratchet wheel (25649….)	Inbus 1/8"	4x	4.5
Spring plug (12002 W / 12003 W) and shaft (25018 / 25016)	14001	4x	34
Cable drum (11000 /11001 / 11014) and shaft (25018 / 25016)	14001	4x	34
Cable drum (11001 / 11014) and cable (25111-…)	Bolt 3/8"-16UNC-1 1/4" spec.	2x	18
Coupler (25042) with shaft (25016 /25018) / key (25064 / 25073)	14001	4x	34
Coupler (25042) between the two halves	Bolt 3/8"-16UNC-1 3/4" Nut nylon 3/8"-16UNC	3 3	34 34
Coupler (25034) and shaft (25016 /25018) / key (25064 / 25073)	14001	3x	34
Bottom bracket (25029) and panel	14017	12x	15
Side hinges and panel (per side hinge)	14017	6x	12
Roller carrier and basis side hinge (per hinge)	14022 14023	2x 2x	15 15
Intermediate hinges and panel (per intermediate hinge)	14017	4x	10
Top roller carrier (25046 / 25043) and panel	14017	4x	10
Top roller carrier (25046) and adjustable bracket (25046)	14022 14023	2x 2x	18 18

4.5 Assembling instructions

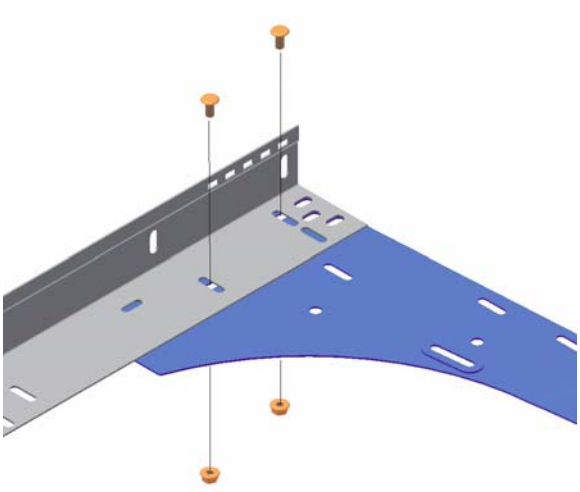
1) Cut the verticale angle

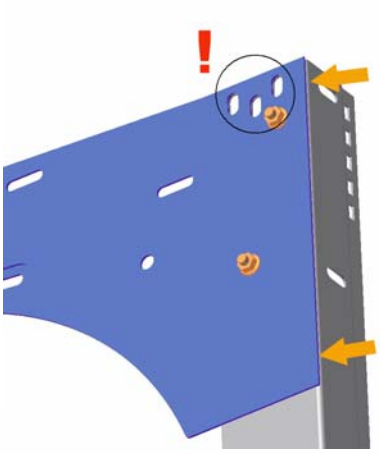
View: right side.



2) Mount the steel cover plate (24714)

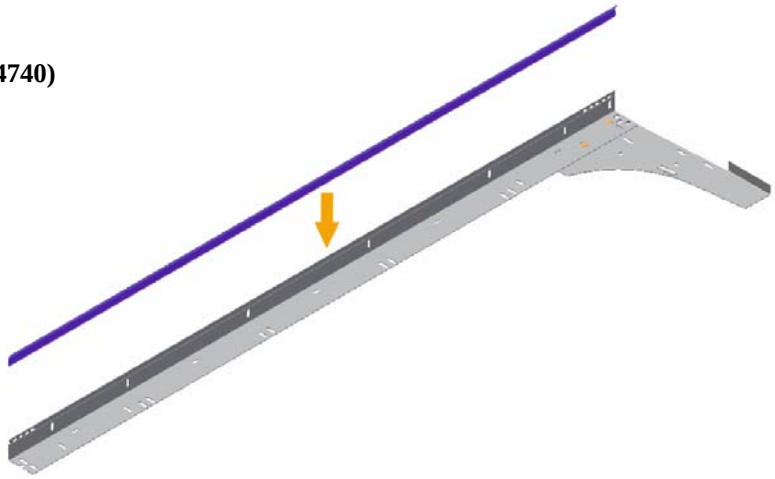
View: right side.





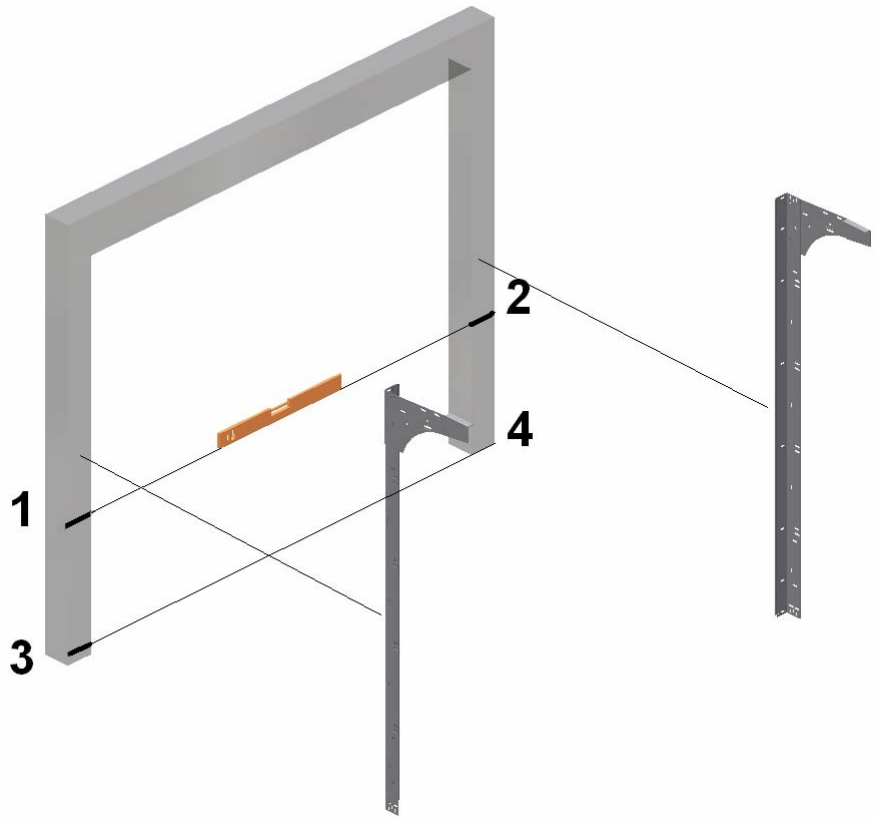
3) Mount the weatherstrip (24740)

View: right side.



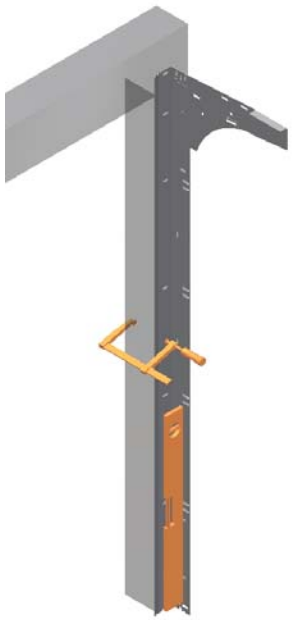
4) Position the vertical tracksets

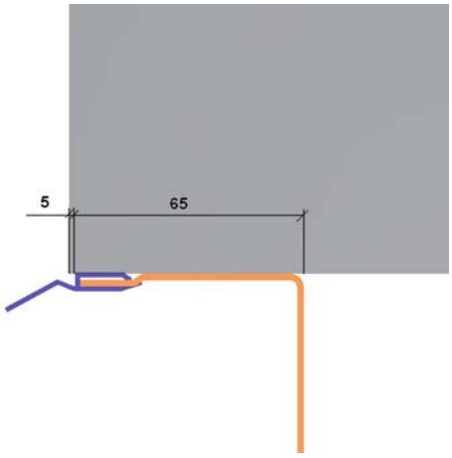
- Floor not level? Fill up at position “3”!
- Height position verticale tracks = underside track, position 4.

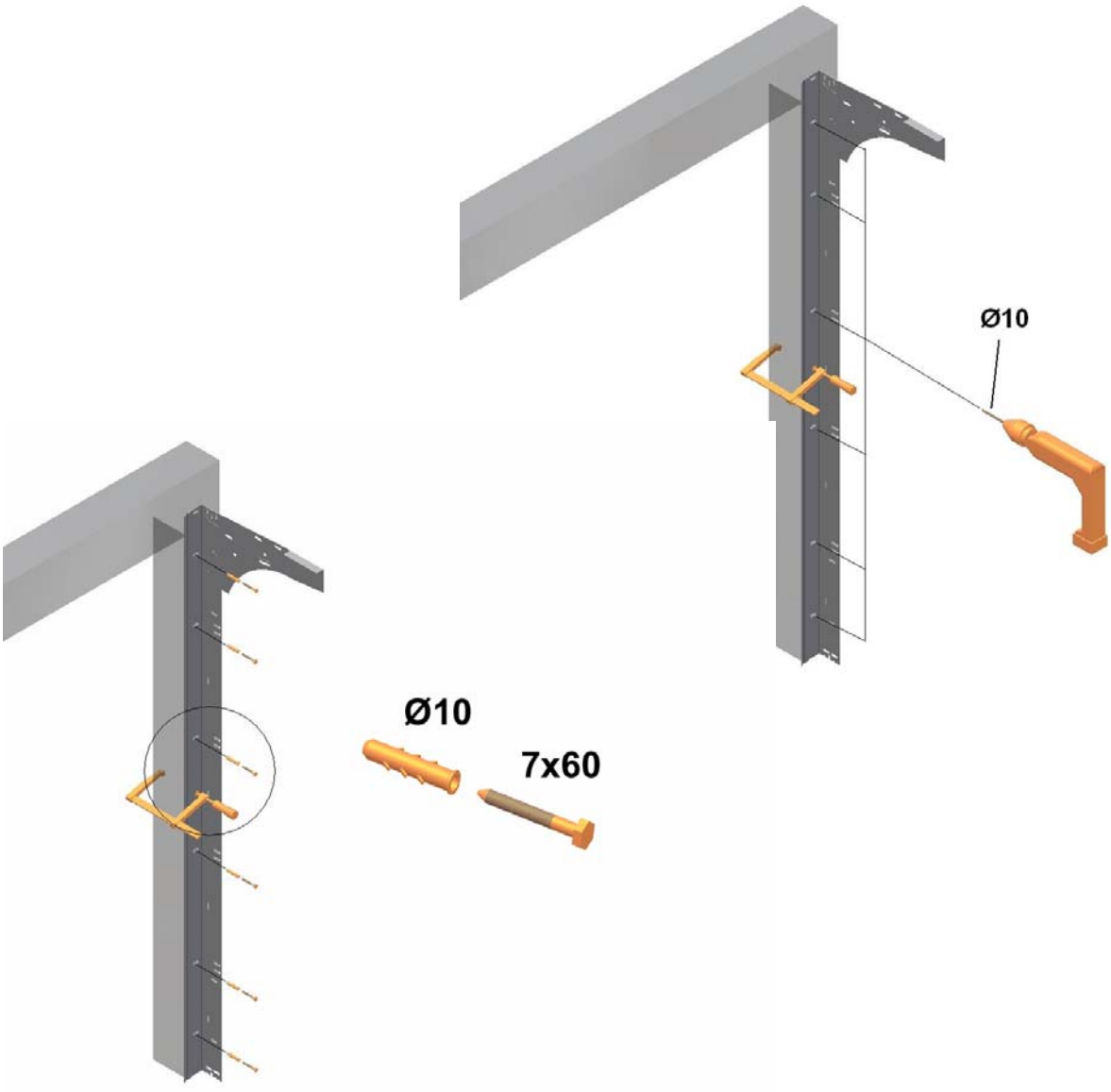


5) Mount verticale track part agains the wall.

View: right side

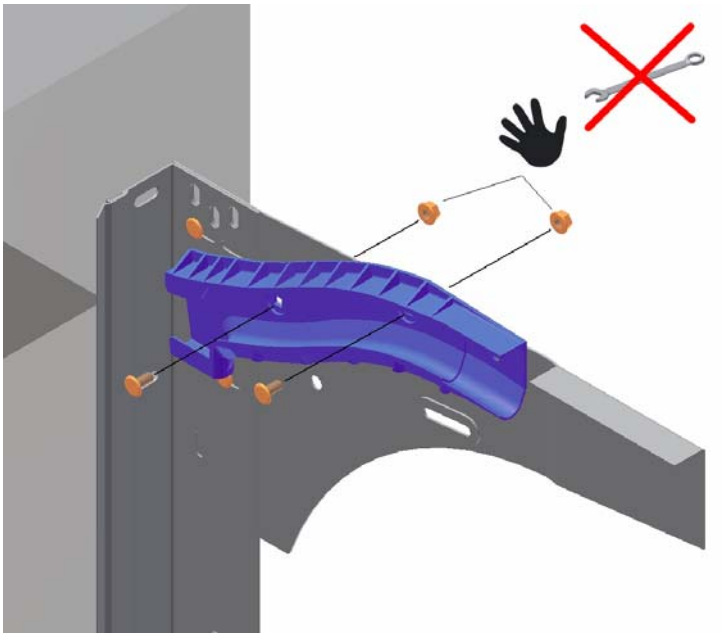






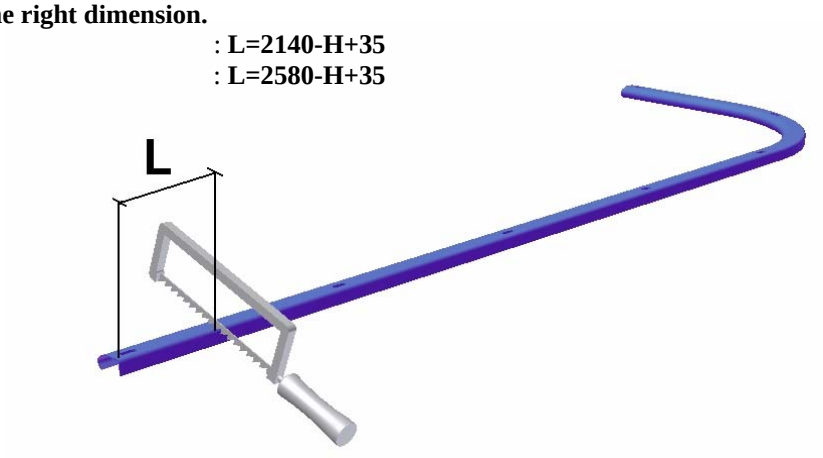
6) Mount the short horn, hand fix, moveable!

View: right side



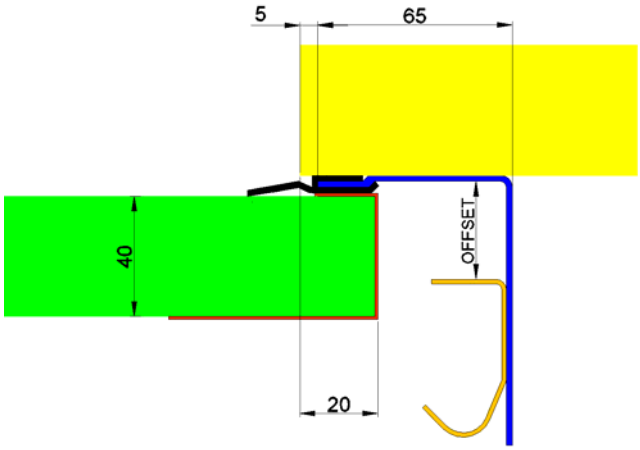
7) Cut the curved track on the right dimension.

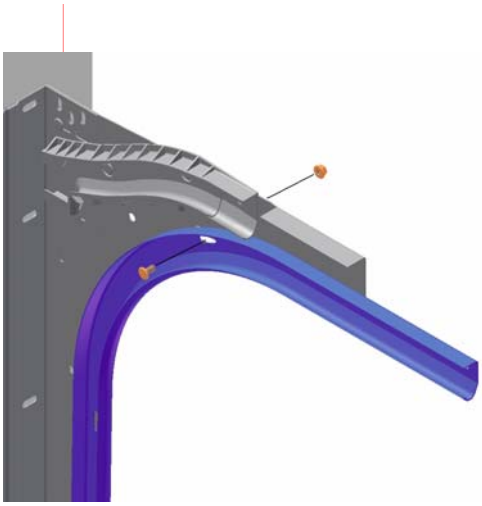
Vesion 2140 : **L=2140-H+35**
Version 2140 till 2580 : **L=2580-H+35**
View: right side

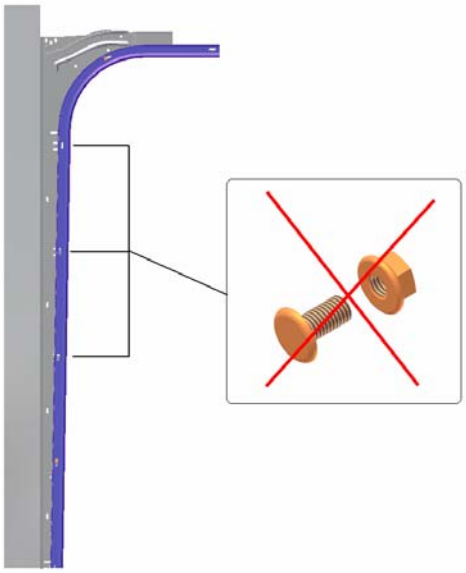


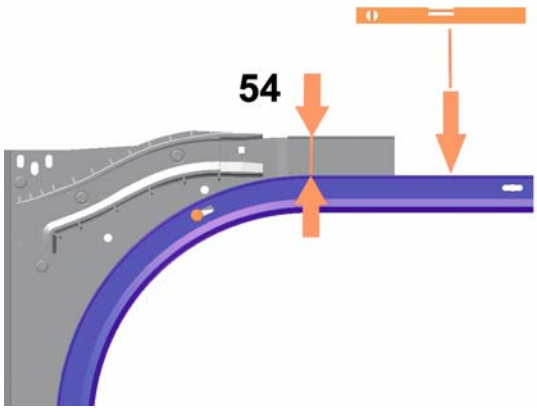
8) Mount the J track with curve.

Offset 25029 : 38 mm (with 40 mm panel)
Offset 25350 : 36 mm (with 40 mm panel)
View: right side





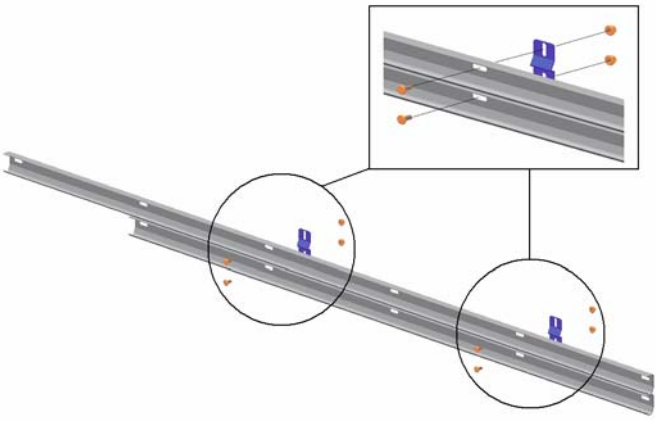




9) Connecting horizontal J track.

View: right side

.

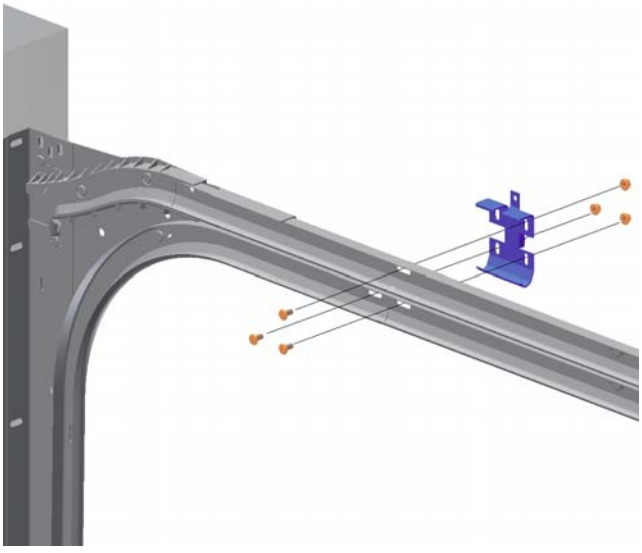


10) Put the connected J track into the verticale trackset part.

View: right side

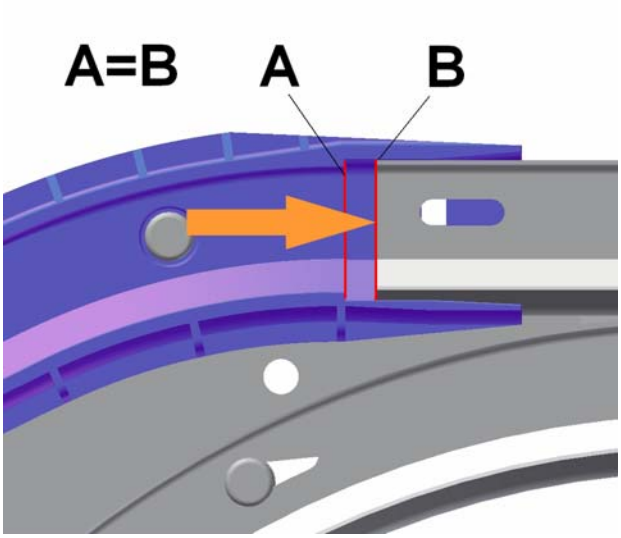
11) Connect the track with the sleeve.

View: right side



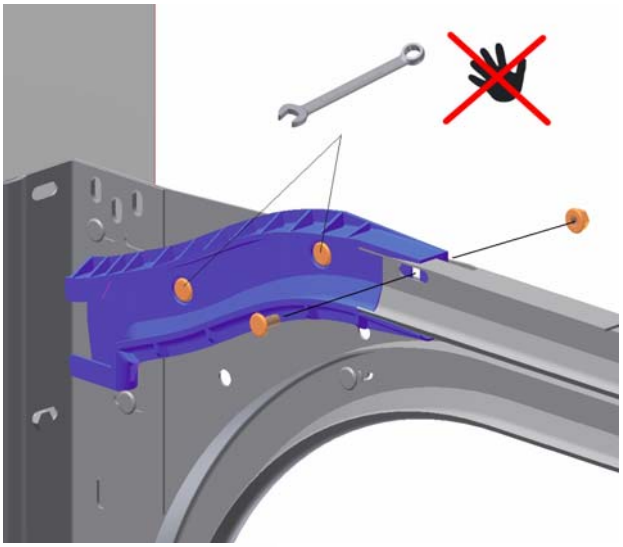
12) Put the short horn against the J track.

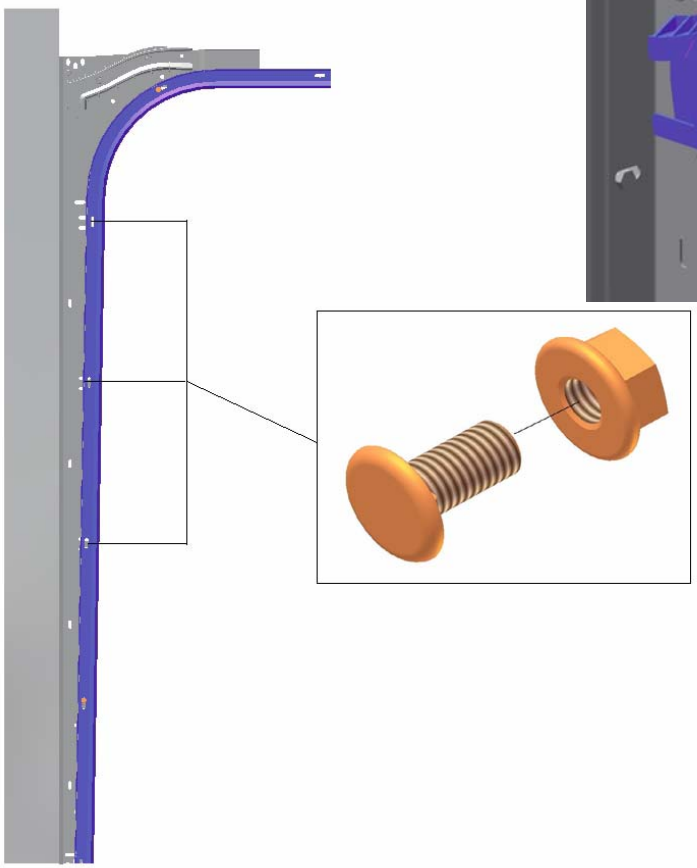
View: right side



13) Fasten the short horn with bolts and nuts.

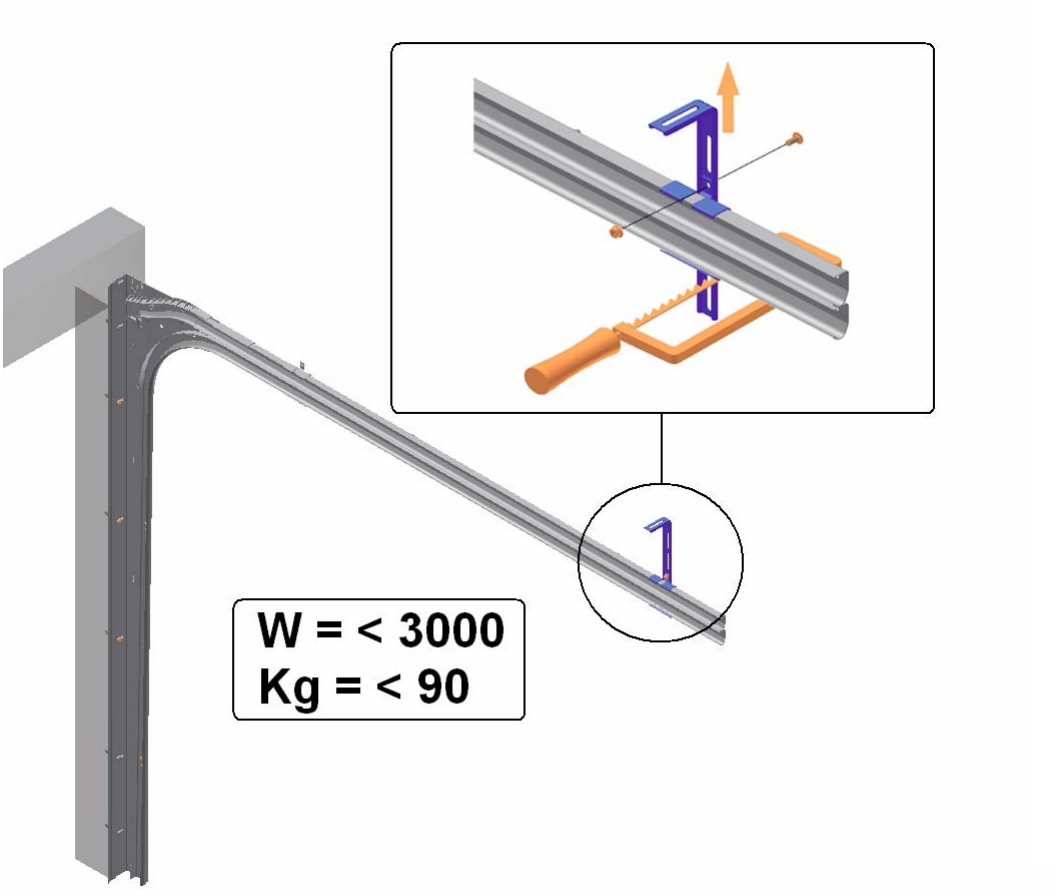
View: right side

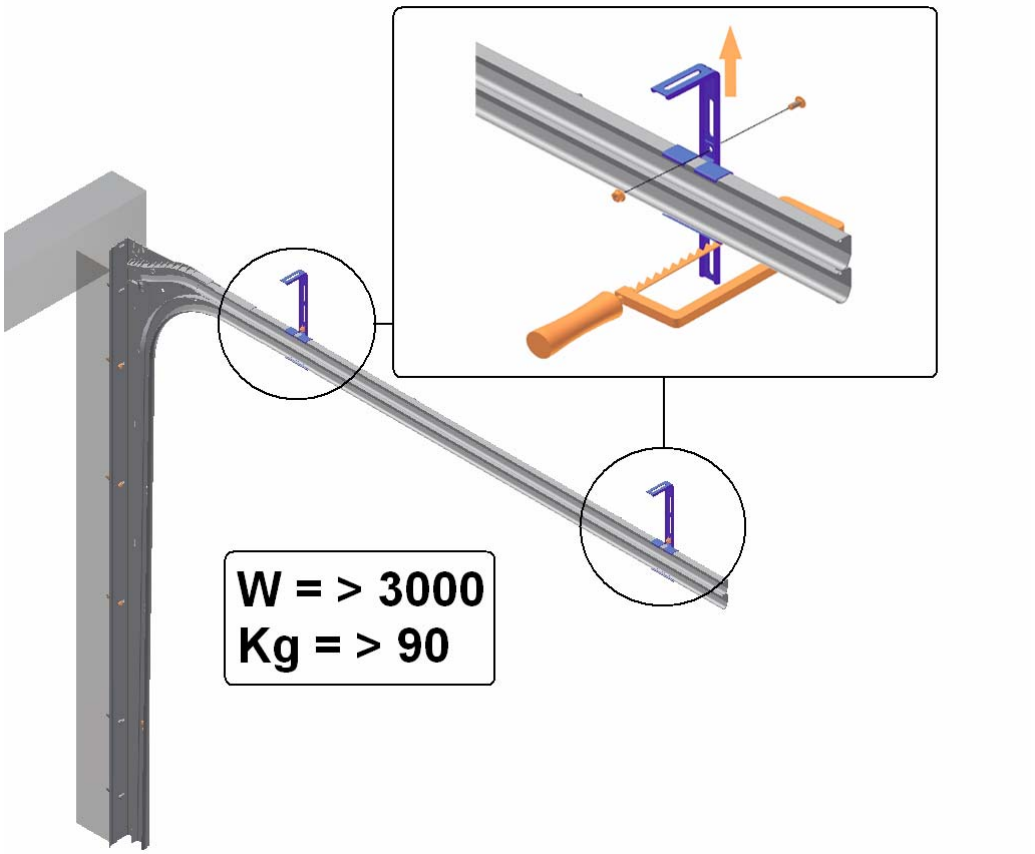




14) Mount the suspension to the roof, to this Left and Richt

View: right side.

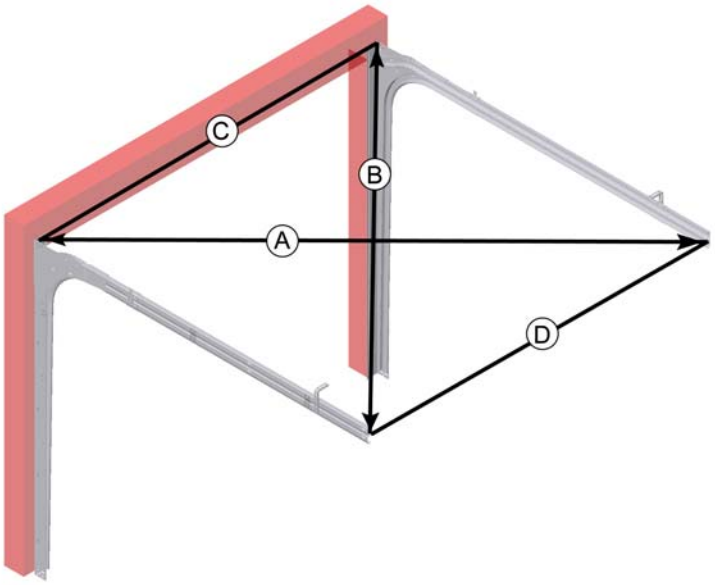




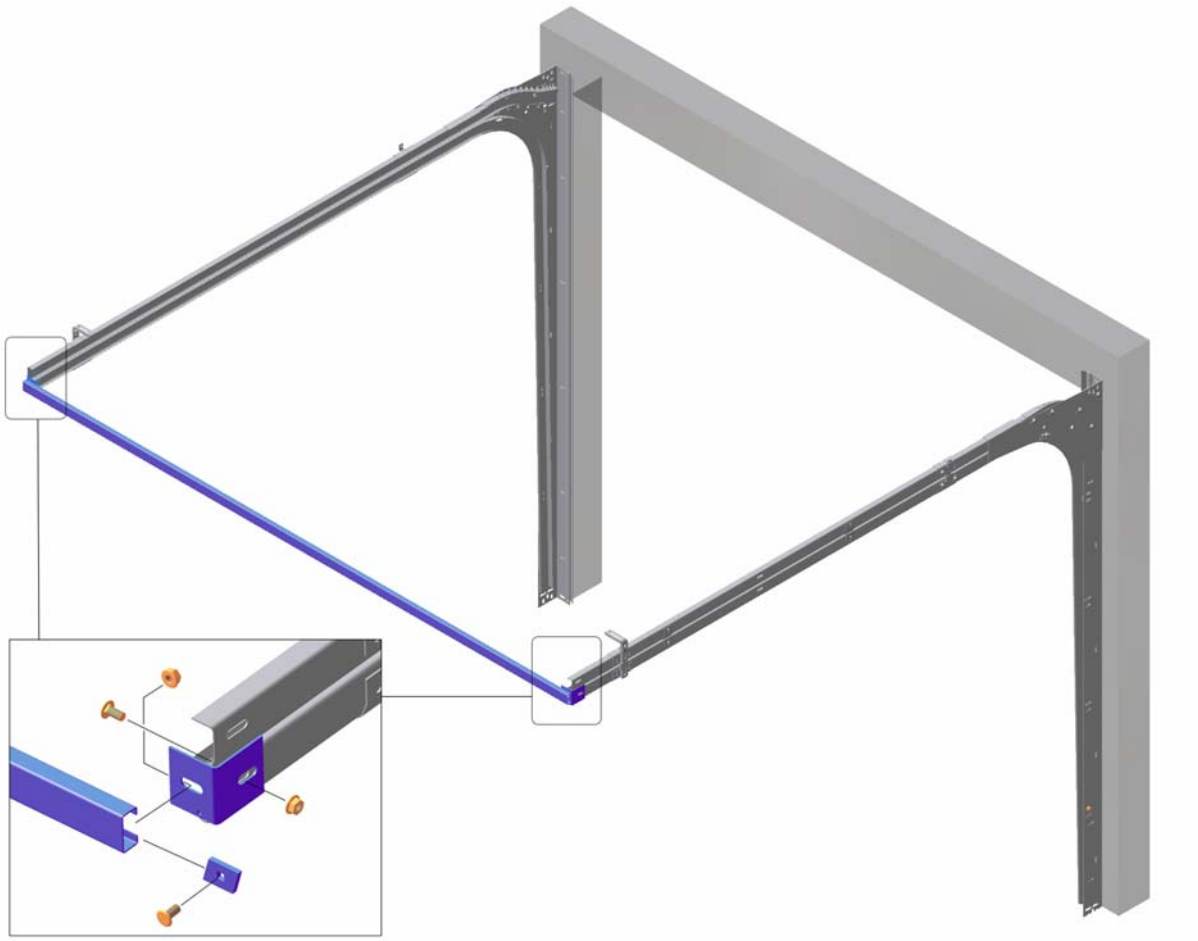
15) Check following:

C=D

A=B

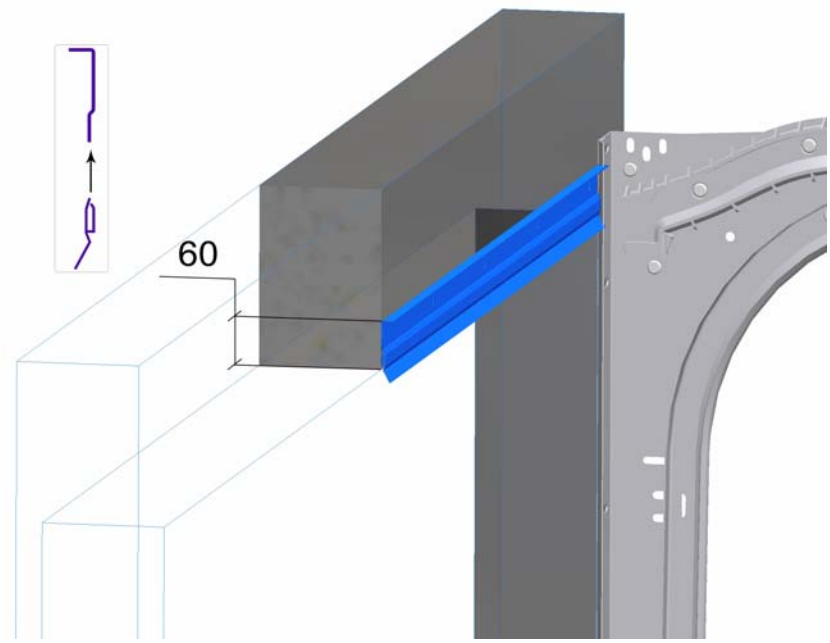


16) Mounting C-track (only if W= >3000)

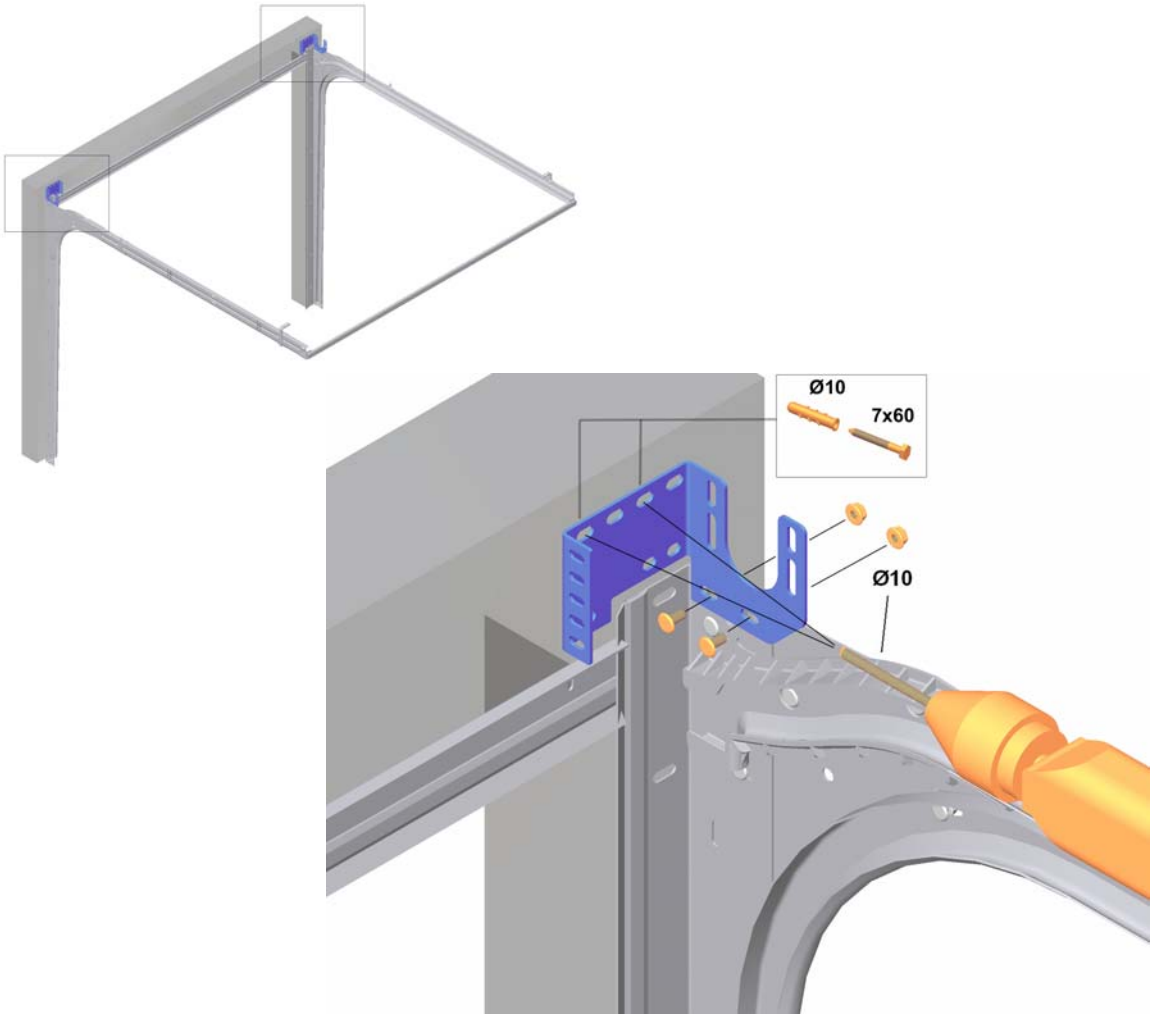


Detail: View: right side

17) Mounting of the lintel sealing:



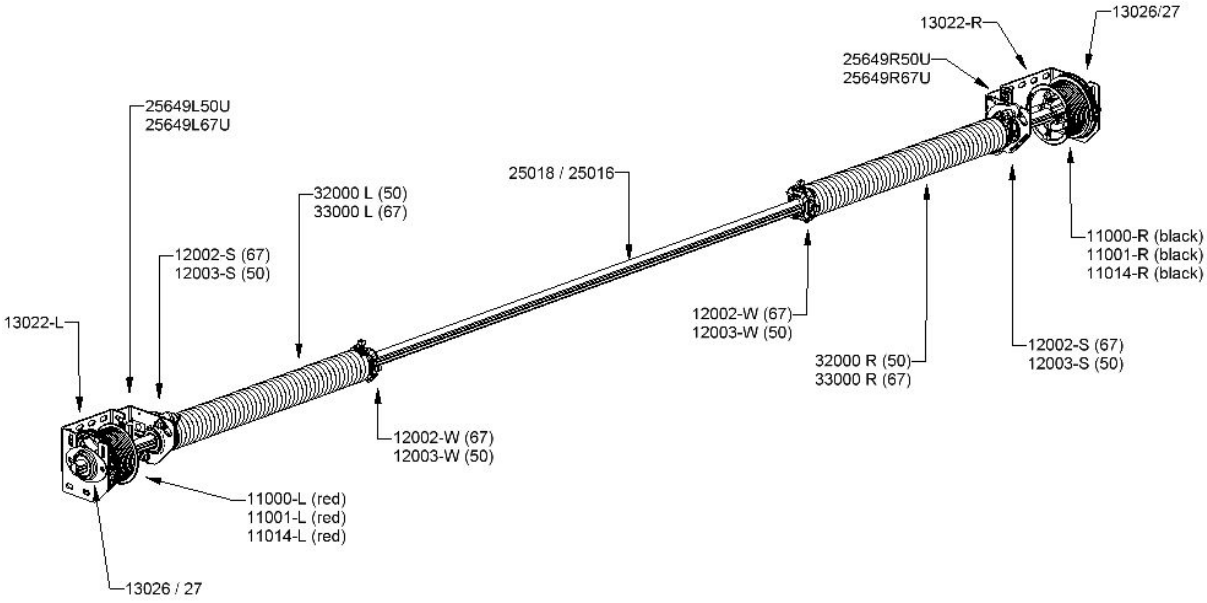
18) Mounting of the end brackets:



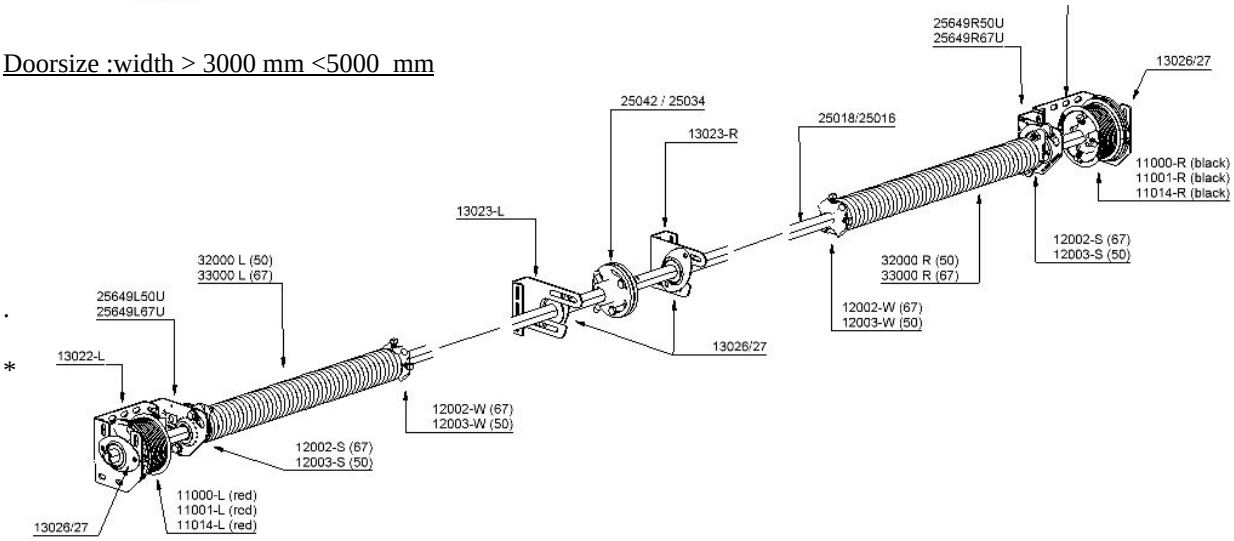
19) Mounting the shaft and springs:

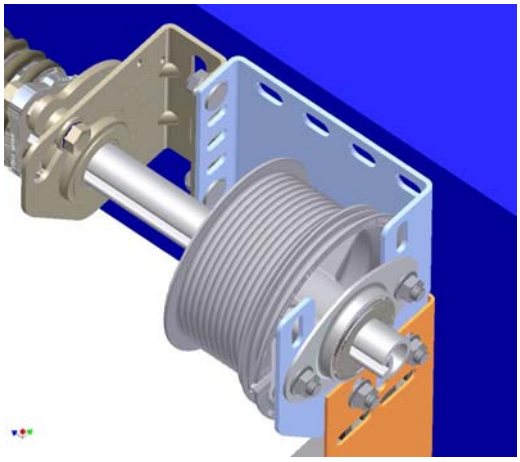
Use : seperate manual residential spring break device (25649-50 / 25649-67)

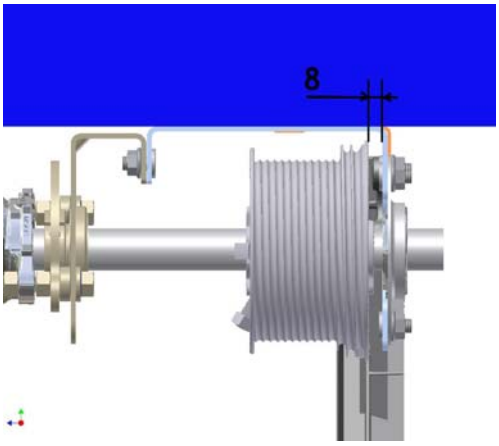
Doorsize : width < 3000 mm



Doorsize :width > 3000 mm <5000 mm

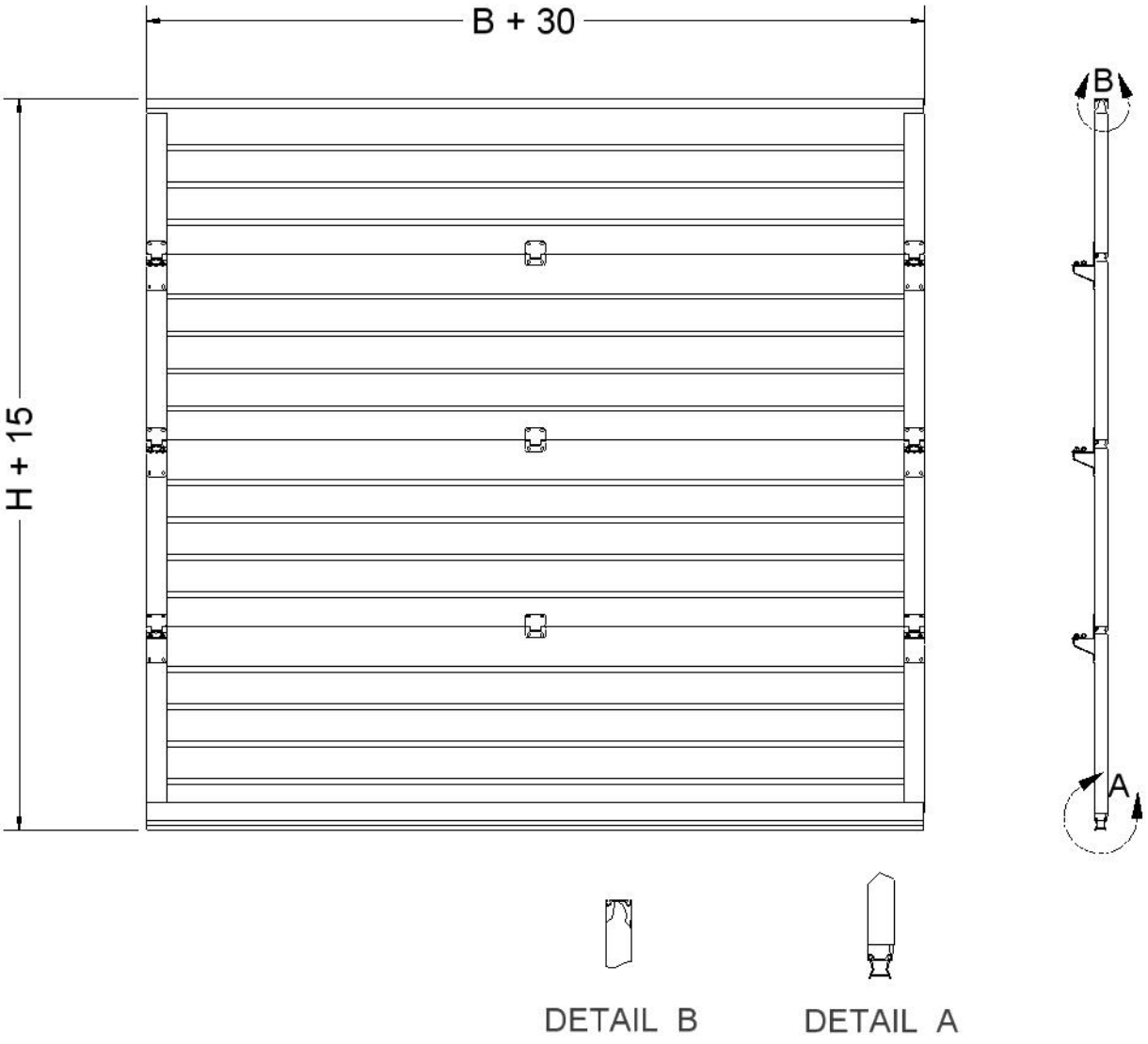






20) Montage van de panelen:

General :
Hereby a general description for mounting the panels.
Always ask the manufacturer of your panel which additional measures, if any, are needed to guarantee the finger guard Scharnieren voorboren met een Ø 4,5 mm boor ,echter raadpleeg uw paneel fabrikant voor de juist voorboor maat! Generally, sandwich panels (steel plates with PUR foam) need pre-drilling with Ø 4.5 mm. However always check with the manufacturer of your panels which exact size you need for pre-drilling!
The entire door blade including aluminium profiles and bottom seal must have the following dimensions.
.



21) Voormontage bodemsectie:

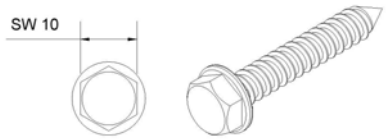
Important: NEVER shorten the bottom panel to determine the total height of the door blade; always shorten the top panel!
Consult Annex: A to select the correct hinge and panel combination.
The distance between the central hinges must be distributed evenly over the panel length, see table 1. The recommended maximum torque of the different parts is listed in table 2.

Tabel 1

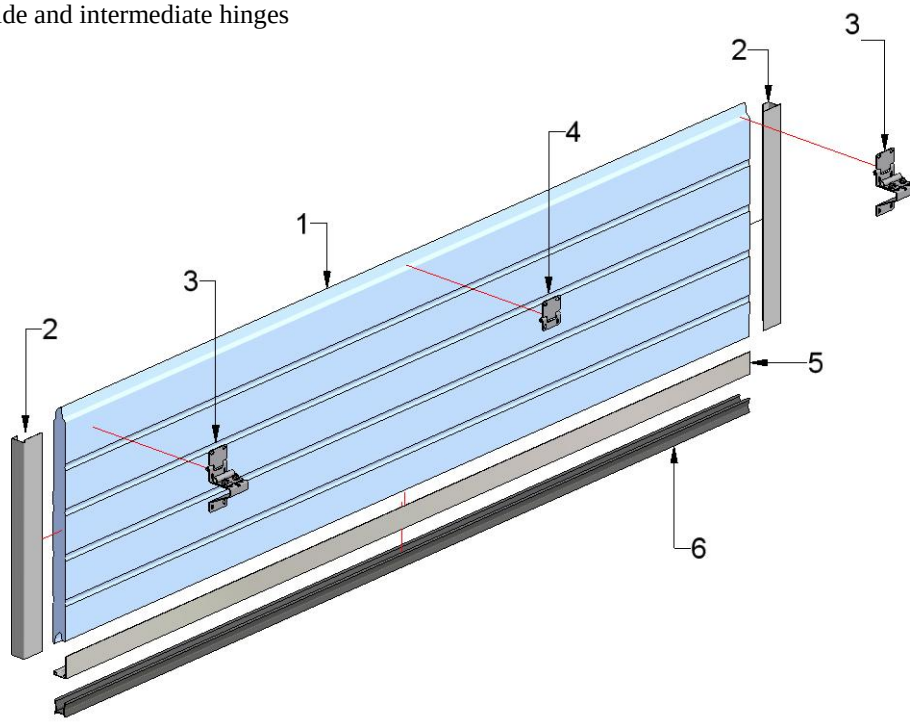
Deurbreedte	Aantal middenscharnieren
0-2749	1
2749-3999	2
3999-5000	3

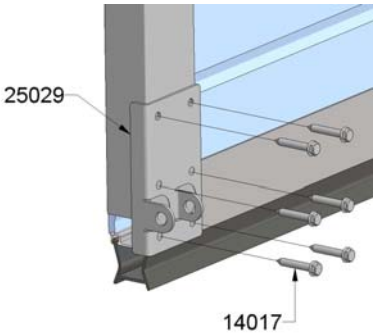
Tabel 2

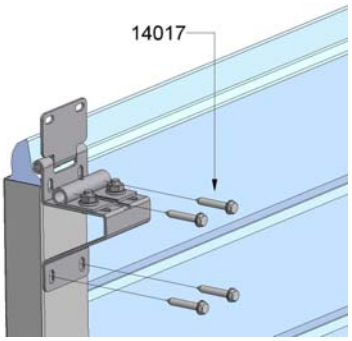
Plaat schroef Art. 14017	Aandraaimoment
Bodenkonsole	12 Nm
Zijscharnier	12 Nm
Middenscharnier	10 Nm
Toprolhouder	12 Nm

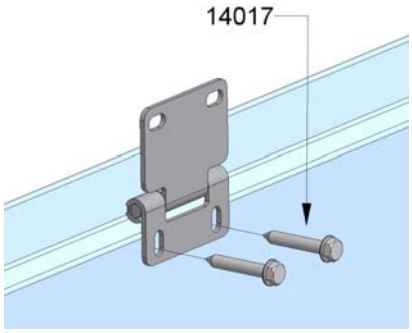


- Saw the panel (1) to the right length.
- Mount the end caps (2) on the panel (1) using blind rivets.
- Slide the aluminium profile (5) along the entire length of the panel (1) and secure it with blind rivets. Slide the sealing rubber on the aluminium profile.
- Mount the bottom bracket 25029.
- Mount the side and intermediate hinges



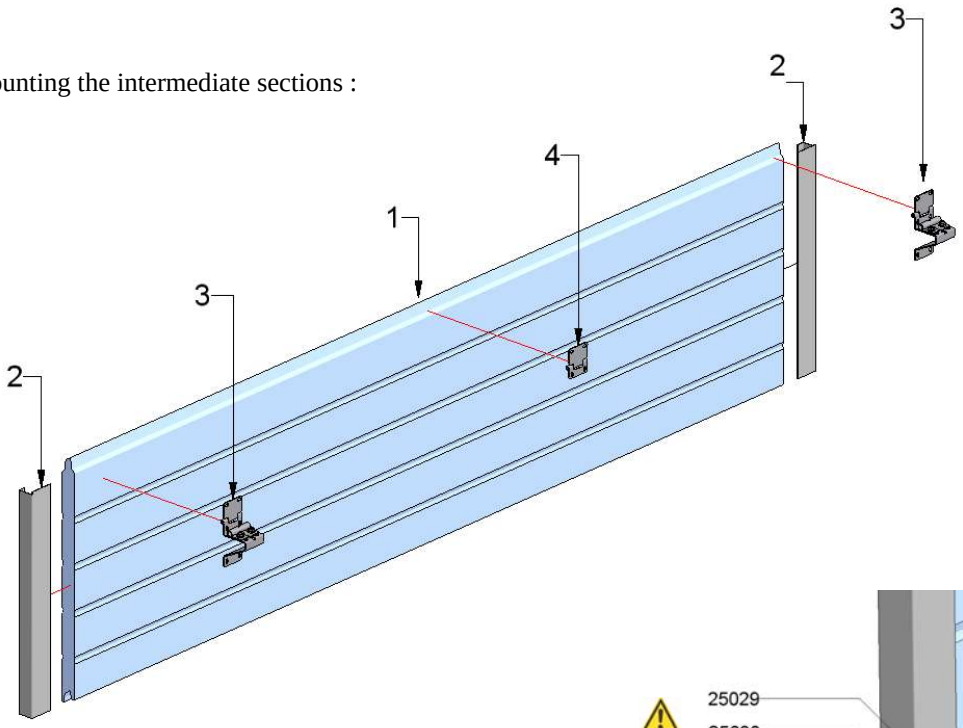


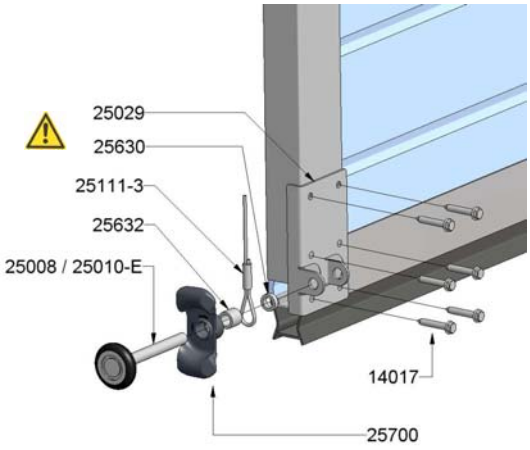




22) Pre-mounting the intermediate sections :

.

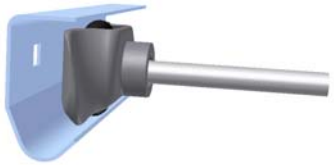




23) **<u>Placing the panels:</u>**

Ensure that you do not forget spacer 25630! Otherwise there is a risk of damaging the cable set.

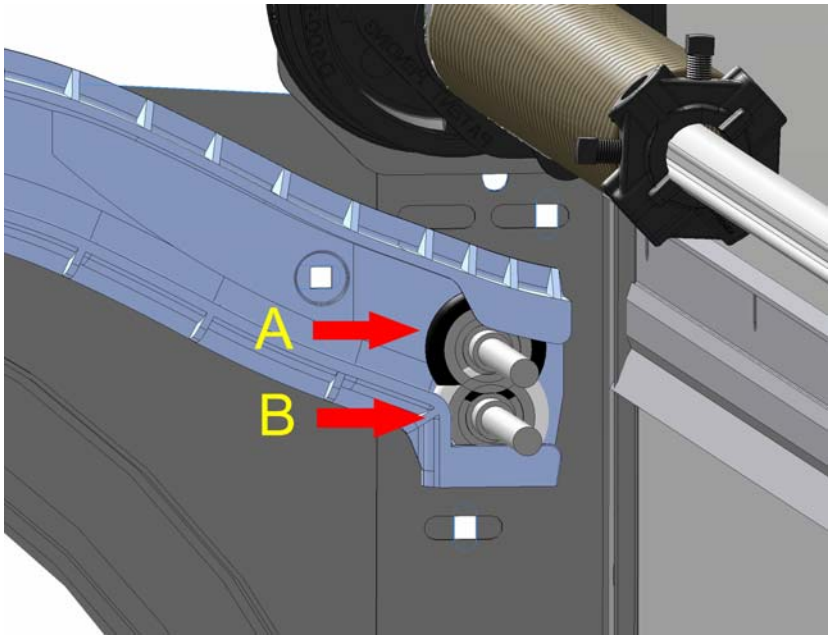
- Slide the finger guards (25700) over the track roller body before mounting the track rollers.
- Place the intermediate sections on the bottom sections and connect them with the hinges. Adjust the nylon rollers in such a way that the plastic tread lies in the rounding of the rail and that the play between panel and side seal (24740) is reduced to a minimum. You should be able to turn the plastic with your hand.



24) Placing the top panel:

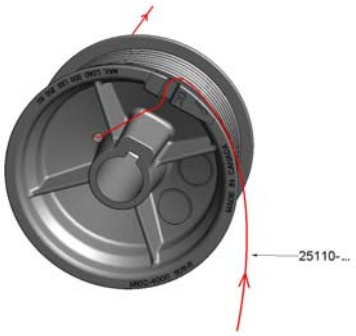
- Saw the top panel at the correct height.
- Do not mount any finger guards (25700) on the top roller!
- The top roller's mounting to the top roller holder depends on how the door is driven:

POSITION A = E-driven
POSITION B = Hand driven



25) Mounting the cable and positioning the cable drum

- Level the shaft.
- Lead the cable (25111-3) of the bottom bracket (25029) behind the shafts of the roller to the cable drum (assuming a 11001-11014 cable drum is being used)
- Slide the cable end through the cable fixing hole of the cable drum (11001-11014) and turn the cable drum in such a way that the cable is tensioned and that there is at least cable of ½ a winding** on the drum; then mount the key (25064-25073) between shaft (25018-25016) and cable drum (11001 -11014). *See figure on the right*



*** Equals 2 **TÜV approved** windings // Ref TÜV : BB-FTA-MUC/re-sc 30604_Besch_torque.doc*

- Align the cable drum (11001-11014) in such a way that it is possible to freely wind up the cable (25111-..). Secure the cable drum (11001-11014) with the fixing bolts on the shaft between 27 – maximum 34 Nm.
- The cable fixing bolt must be tightened with 13 Nm.

Now block the shaft using the pinchers and secure the other cable the same way.
It is important that both cables are equally tensioned and that the door blade is balanced .

26) Tensioning the torsion springs

Secure the door in such a way that it cannot go up. Fix the vertical tracks for instance with pinchers.
Tension the springs according to the following procedure.
The required number of turns of the spring is indicated on the labels of the assembled springs.
After tensioning, fix the spring fittings on the shaft with 27 up to 34 Nm (this applies both to spring fitting 12002-W and to spring fitting 12003-W.)

IMPORTANT: There is much strain on tensioned springs; proceed carefully at all times, especially when performing corrective maintenance, and use tensioning bars that fit well and that are kept in good condition (12025)

Tension the springs from the bottom to the top! Because of the stretching the spring becomes thinner and longer (number of turns x wire thickness); if this is not the case, the left and right spring have been switched!

Turns spring :

Deur hoogte	Kabeltrommel	spanslagen
2000	11000 /11001 / 11014	6.9
2125	11000 /11001 / 11014	7.2
2250	11000 /11001 / 11014	7.5
2375	11000 /11001 / 11014	7,9
2500	11000 /11001 / 11014	8.3

1) Mark the spring with a straight line.
2) Insert the first tensioning bar in the tension head.
3) Turn the first tensioning bar a quarter of a turn to stretch the spring.
4) Hold the first tensioning bar and place the second bar in the next hole of the spring fitting.
5) Turn the second a quarter of a turn.
6) Hold the second tensioning bar (takes over the tension) and remove the first bar
7) Repeat steps 3 – 4 – 5 – 6 until the correct tension has been reached.
8) Secure the spring fitting on the shaft by turning both bolts of the fitting with 27 up to 34 Nm.
9) Now remove the second tensioning bar
10) Check the number of turns that the spring has made by counting the number of lines on the spring.

Remove the block of the shaft and the vertical tracks and your sectional door is ready.
Check if the door is well balanced. If not, then check item . (Correction of the spring tension).

27) <u>Correcting the spring tension</u>

Block the shaft and the door blade
Secure the door so that it cannot go up. Do so for instance by fastening pinchers on the vertical tracks.

IMPORTANT: There is much strain on tensioned springs; proceed carefully at all times, especially when performing corrective maintenance, and use tensioning bar that fit well and that are kept in good condition (12025)

You can correct the tension by stretching or releasing the spring with 1 full turn at the most. Make sure that both springs are equally corrected.

1) Insert the first tensioning bar in the tension head.
2) Turn the tensioning bar in the appropriate direction.
3) Carefully loosen the bolts of the spring fitting and take over the spring tension.
4) Hold the first tensioning bar and place the second bar in the next hole of the spring fitting.
5) Turn the second tensioning bar a quarter of a turn in the desired direction.
6) Hold the second tensioning bar (takes over the tension) and remove the first bar
7) Repeat steps 4 - 5 - 6 until the correct tension has been reached.
8) Secure the spring fitting on the shaft by turning both bolts of the spring fitting with 27 up to 34 Nm.
9) Now remove the second bar.

Remove the blocking of the shaft and the vertical tracks and your sectional door is ready.

.

28) Finishing the door

Mount the remaining accessories, such as the handle, lock or bolt.
Note: Do not mount any bolts or locks on an E-driven door

29) Placing the CE-ID plate (sticker)(Obliged)!

Now place the CE sticker (art 80310 NL / FR) on the left or on the right side under an end cap of the second section.

5 Electrical operator

Mount the operator according to the instructions of it's' manufacturer.

Attention!
In case of electrical disconnection one must be able to open the door by an emergency handle. The door can then be opened or closed manually.
The door may only be operated by a handle.
The handle must be mounted in the centre of the door.
If a second exit in the garage is missing, a disconnecting device must be mounted

5.1 Adjusting the door operator

The door operator must be adjusted according the manual of the door operator.

It is stressed once again that this set of fittings is only TÜV / CE certified in combination with door operators complying with Annex B. If a different door operator is used, other than the door operators prescribed in Annex B, the force measurements according to EN 12445/ EN 12453 must be performed again!

6 First use

The garage door must be put into operation by an experienced installer.
The first use of the garage door must be registered. The person responsible for the installation must write the declaration of conformity and affix the CE sticker.
Affixing the CE-sticker means declaring that the conditions of the EN directives have been met.

7 Trouble Shooter

Points to be checked with a not well functioning/ not balanced door

Check 1)	Check the weight of the door
Check 2)	Did you receive the right type of drums?
Check 3)	Have the cable drums been mounted correctly? Pay attention to the following (looking from inside to outside) - Left drum coded red and mounted on the left side? - Right drum coded black and mounted on the right side? - Does the cable run between construction/ wall and shaft? - Check the position of the cable entry
Check 4)	Check if the right torsion springs have been delivered and mounted - Check the wire diameter - Check the spring diameter - Check the length of the springs (excluding spring fittings)
Check 5)	Door being closed friction must not be too strong. One must be able to still move the rollers.
Check 6)	Are there no obstacles while opening/ closing the door?
Check 7)	Check the space between doorblade and tracks, which should be around 20 mm and the cable is not to get stuck at any place.
Check 8)	Are the rollers parallel in vertical and horizontal direction? Take measurement of distance and height.

8 Dismounting

General:

- Dismounting may only be carried out by qualified personnel.
- Make sure that only personnel taking care of the mounting/dismounting is present at the mounting place. Keep other persons at a distance, for example by using a safety ribbon
- When dismounting the device, make sure there is enough light.
- Make sure that you use the right tools to remove the tension of the springs and make sure you are standing firmly

Procedure:

Block the shaft with the pinchers.
Secure the door in such a way that it cannot come up. Do so for instance by fastening pinchers to the vertical tracks.

IMPORTANT: There is much strain on tensioned springs; proceed carefully at all times and use tensioner bars that fit well and that are kept in good condition (12025)

1) Insert the first tensioning bar in the spring fitting.
2) Keep the first tensioning bar firmly in your hands and carefully loosen the bolts on the spring fitting and take over the spring tension.
3) Now place the second tensioning bar in the next hole of the sping fitting and carefully release the spring. The spring is basically released from top to bottom.
4) Put the first tensioning bar back in the spring fitting and release.
5) Repeat steps 3 - 4 until the spring is released.
6) Repeat steps 1 - 4 with the other spring.
7) Loosen the bolts of the cable drums and remove the steel cables from the cable drums.
8) Dismount the shaft with springs
9) Loosen the bolts and nuts from the coupling of the synthetic curve with horizontal track.
10) Dismount the suspension and slide the horizontal track out of the plastic curve.
11) Dismount the panel sections from top to bottom by loosening the roller carriers and intermediate hinges.
12) Dismount the synthetic curve.
13) Dismount the vertical angle.

8.1 Removal

All parts of the garage door are easy to separate and to recycle.
Separate all elements after dismantling.
Note: The material is only recyclable if separated
Turn in the materials at the authority responsible for the treatment of separated materials.

10 Your Manufacturer

DOCO International b.v.
Nusterweg 96
6136 KV Sittard (NL)
Tel. +31 46-4200666
Fax. +31 46-4526894
E-mail : info@doco-international.com

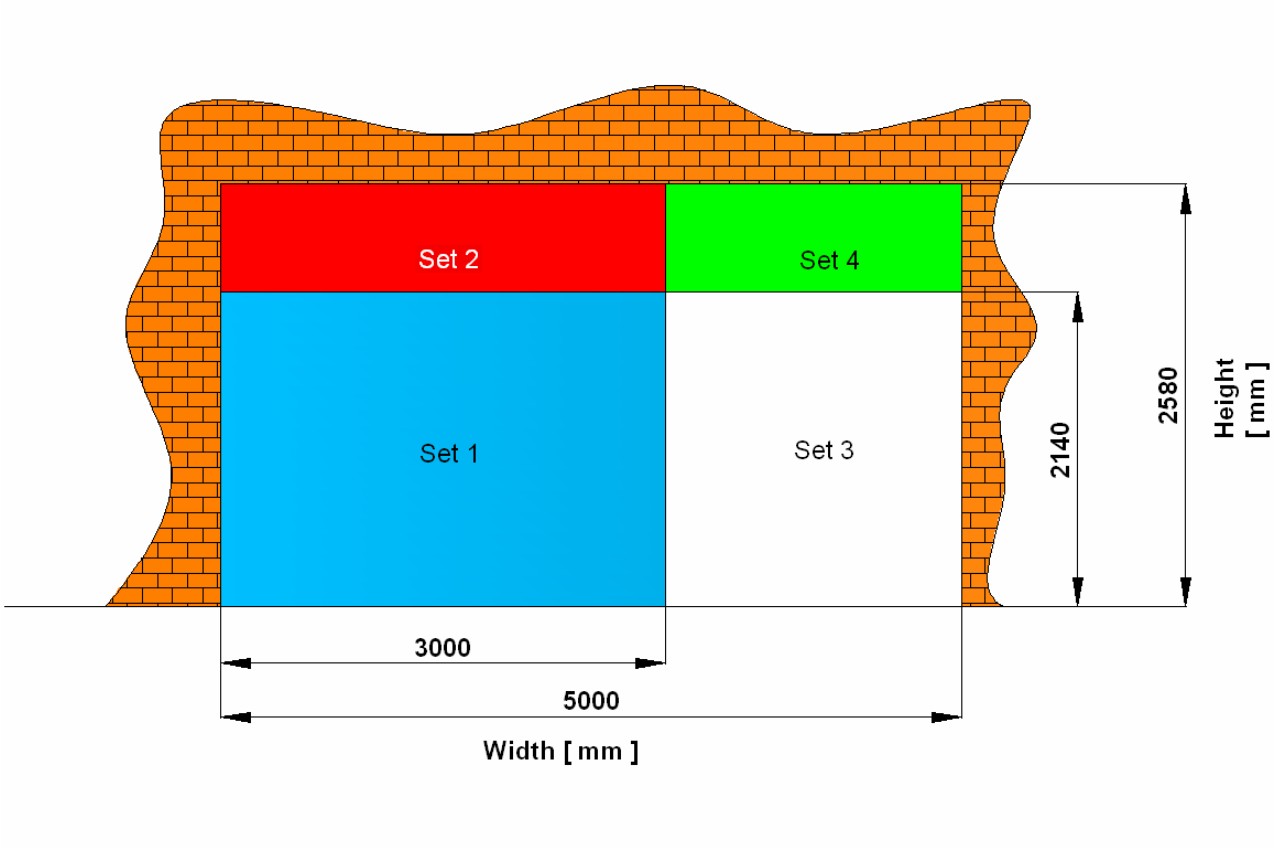
Annex: A Overview hardware with panel combination

Panel (1)	Endcap (2)	Side hinge (3)	Intermediate hinge (4)	Alu.Profile (5) Top and bottom	Bottom seal (6)
Bremet Securwall	80612L (610) / 80617L (488)	25734	25733	80041	80042
Bremet Securwall	80612L (610) / 80617L (488)	25162 / 25163	25733	80041	80042
Hoesch	80612L (610) / 80613L (488)	25334	25333	80041	80042
Hoesch	80612L (610) / 80613L (488)	25162 / 25164	25333	80041	80042
Tekla Teckentrup	118438 / 118449	109555 / 122292	109554	116261	109549
Apco - Kingspann	80612L (610) / 80617L (488)	25334	25333	80041	80042
Ryterna	80612L (610) / 80617L (488)	25634	25633	80041	80042

Annex B Certified operators

Operator :	Type :	Max. door width
Sommer	Aperto 868 L(550N)	3500 mm
Sommer	Aperto 868 LX(800N)	5000 mm
Sommer	Duo 500S (500N)	3000 mm
Sommer	Duo 800SL (800N)	5000 mm
Marantec	Comfort 220 (500N)	3500 mm
Marantec	Comfort 250 (700N)	5000 mm

Annex C: Kits (5 pages)



STF SET 1

WxH [mm] : ≤3000 x ≤2140

Art.nr.	Pieces	Amount	Description	Cutting
Trackset with seals				
23699	2	St.	Vertical angle, L=2230 mm (1xleft + 1xright)	H+90
21182-L	2	St.	Track, L=1820 mm short horizontal	
21226-L	2	St.	Track, L=2260 mm long horizontal	
24714	1	Pr.	Steel plate 2 mm	
22251-L	1	Pr.	Curved track 90,5°	Lcut=2140-H+35
22979	1	Pr.	Plastic short horn	
24604	4	St.	Track connection plate	
24744	1	St.	Weather strip, L = 4500 mm (vertical 2x)	H+50
24741	1	St.	Weather strip, L = 3500 mm (horizontal)	W
24710	1	St.	Installation profile, L = 5500 mm	W-20
Suspension				
24807	2	St.	Roof hangar	
24809	4	St.	Sleeve for installation bracket	
Power-unit				
11014	1	Pr.	Cable-drums	
13022	1	Pr.	Mounting bracket	
13026/27	2	St.	Bearing with container.	
25649L50-U	1	St.	Residential spring failure device, Left Type 50 mm	
25649R50-U	1	St.	Residential spring failure device, Right Type 50 mm	
25019-32	1	St.	Tubular shaft, L=3200 mm.	W+220
30xxx	1	Pr.	Assembled galvanised springs: see page 30	
25110-3	1	Pr.	Aircraft cable assembled, 3 mm, L=3000 mm	
25073	4	St.	Bended key for tubular shaft	
Panel components				
25029	1	Pr.	Bottom corner bracket	
25632	2	St.	Spacers for rollers, 10 mm	
25631	2	St.	Spacers for rollers, 7,5 mm	
25630	2	St.	Spacers for rollers, 5 mm	
25403	1	St.	PVC pull handle	
80041	1	St.	Aluminium profile lg=5600 (1xbottom , 1x top)	W+30
80042	1	St	EPDM bottom seal	W+30
Fasteners				
14017	78	St.	Self tapping fastener	
14022	66	St.	Nuts for track bolts M8	
14023	66	St.	Track bolts M8	

STF SET 2

WxH [mm] : ≤3000 x ≥2140≤2580

Art.nr.	Pieces	Amount	Description	Cutting
Trackset with seals				
23698	2	St.	Vertical angle, L=2670 mm (1xleft + 1xright)	H+90
21226-L	2	St.	Track, L=2260 mm short horizontal	
21270-L	2	St.	Track, L=2700 mm long horizontal	
24714	1	Pr.	Steel plate 2 mm	
22301-L	1	Pr.	Curved track 90,5°	Lcut=2580-H+35
22979	1	Pr.	Plastic short horn	
24604	4	St.	Track connection plate	
24740	1	St.	Weather strip, L = 6000 mm (vertical 2x)	H+50
24741	1	St.	Weather strip, L = 3500 mm (horizontal)	W
24710	1	St.	Installation profile, L = 5500 mm	W-20
Suspension				
24807	4	St.	Roof hangar	
24809	4	St.	Sleeve for installation bracket	
Power-unit				
11014	1	Pr.	Cable-drums	
13022	1	Pr.	Mounting bracket	
13026/27	2	St.	Bearing with container.	
25649L50/67 U	1	St.	Residential spring failure device, Left Type 50/67 mm	
25649R50/67 U	1	St.	Residential spring failure device, Right Type 50/67 mm	
25018-35	1	St.	Tubular shaft, L=3500 mm.	W+220
30xxx	1	Pr.	Assembled galvanised springs: see page 30	
25110-3	1	Pr.	Aircraft cable assembled, 3 mm, L=3000 mm	
25073	4	St.	Bended key for tubular shaft	
Panel components				
25029	1	Pr.	Bottom corner bracket	
25632	2	St.	Spacers for rollers, 10 mm	
25631	2	St.	Spacers for rollers, 7,5 mm	
25630	2	St.	Spacers for rollers, 5 mm	
25403	1	St.	PVC pull handle	
80041	1	St.	Aluminium profile lg=5600 (1xbottom , 1x top)	W+30
80042	1	St	EPDM bottom seal	W+30
Fasteners				
14017	94	St.	Self tapping fastener	
14022	66	St.	Nuts for track bolts M8	
14023	66	St.	Track bolts M8	

STF SET 3

WxH [mm] : ≤3000≤5000 x ≤2140

Art.nr.	Pieces	Amount	Description	Cutting
Trackset with seals				
23699	2	St.	Vertical angle, L=2230 mm (1xleft + 1xright)	H+90
21182-L	2	St.	Track, L=1820 mm short horizontal	
21226-L	2	St.	Track, L=2260 mm long horizontal	
24714	1	Pr.	Steel plate 2 mm	
22251-L	1	Pr.	Curved track 90,5°	Lcut=2140-H+35
22979	1	Pr.	Plastic short horn	
24604	4	St.	Track connection plate	
24744	1	St.	Weather strip, L = 4500 mm (vertical 2x)	H+50
24745	1	St.	Weather strip, L = 5000 mm (horizontal)	W
24710	1	St.	Installation profile, L = 5500 mm	W-20
Suspension				
24807	4	St.	Roof hangar	
24809	4	St.	Sleeve for installation bracket	
24621	2	St.	Mounting angle	
24854	1	St.	C-profile L=5400 mm	W+130
24620	2	St.	Lock plates	
Power-unit				
11014	1	Pr.	Cable-drums	
13022	1	Pr.	Mounting bracket	
13026/27	4	St.	Bearing with container.	
25649L50/67-U	1	St.	Residential spring failure device, Left Type 50/67 mm	
25649R50/67-U	1	St.	Residential spring failure device, Right Type 50/67 mm	
25018-60	1	St.	Tubular shaft, L=6000 mm.	W+220
30xxx	1	Pr.	Assembled galvanised springs: see page 30	
25110-3	1	Pr.	Aircraft cable assembled, 3 mm, L=3000 mm	
25073	4	St.	Bended key for tubular shaft	
13023	1	Pr.	Mounting Bracket	
25042	1	St.	Coupler	
Panel components				
25029	1	Pr.	Bottom corner bracket	
25632	2	St.	Spacers for rollers, 10 mm	
25631	2	St.	Spacers for rollers, 7,5 mm	
25630	2	St.	Spacers for rollers, 5 mm	
25403	1	St.	PVC pull handle	
80041	2	St.	Aluminium profile lg=5600 (1xbottom , 1x top)	W+30
80042	1	St	EPDM bottom seal	W+30
Fasteners				
14017	120	St.	Self tapping fastener	
14022	72	St.	Nuts for track bolts M8	
14023	72	St.	Track bolts M8	

STF SET 4

WxH [mm] : ≤3000≤5000 x ≥2140≤2580

Art.nr.	Pieces	Amount	Description	Cutting
Trackset with seals				
23698	2	St.	Vertical angle, L=2670 mm (1xleft + 1xright)	H+90
21226-L	2	St.	Track, L=2260 mm short horizontal	
21270-L	2	St.	Track, L=2700 mm long horizontal	
24714	1	Pr.	Steel plate 2 mm	
22301-L	1	Pr.	Curved track 90,5°	Lcut=2580-H+35
22979	1	Pr.	Plastic short horn	
24604	4	St.	Track connection plate	
24740	1	St.	Weather strip, L = 6000 mm (vertical 2x)	H+50
24745	1	St.	Weather strip, L = 5000 mm (horizontal)	W
24710	1	St.	Installation profile, L = 5500 mm	W-20
Suspension				
24807	4	St.	Roof hangar	
24809	4	St.	Sleeve for installation bracket	
24621	2	St.	Mounting angle	
24854	1	St.	C-profile L=5400 mm	W+130
24620	2	St.	Lock plates	
Power-unit				
11014	1	Pr.	Cable-drums	
13022	1	Pr.	Mounting bracket	
13026/27	4	St.	Bearing with container.	
25649L50/67-U	1	St.	Residential spring failure device, Left Type 50/67 mm	
25649R50/67-U	1	St.	Residential spring failure device, Right Type 50/67 mm	
25018-60	1	St.	Tubular shaft, L=6000 mm.	W+220
30xxx	1	Pr.	Assembled galvanised springs: see page 30	
25110-4	1	Pr.	Aircraft cable assembled, 3 mm, L=4000 mm	
25073	4	St.	Bended key for tubular shaft	
13023	1	Pr.	Mounting Bracket	
25042	1	St.	Coupler	
Panel components				
25029	1	Pr.	Bottom corner bracket	
25632	2	St.	Spacers for rollers, 10 mm	
25631	2	St.	Spacers for rollers, 7,5 mm	
25630	2	St.	Spacers for rollers, 5 mm	
25403	1	St.	PVC pull handle	
80041	2	St.	Aluminium profile lg=5600 (1xbottom , 1x top)	W+30
80042	1	St	EPDM bottom seal	W+30
Fasteners				
14017	120	St.	Self tapping fastener	
14022	72	St.	Nuts for track bolts M8	
14023	72	St.	Track bolts M8	

Annex D

SPRING sets* **(galvanised pre-installed)**

Article	Springs couple D x d x lg [mm]	Door width [mm]	weight doorblade [kg]
30100	L/R 50x5,0x510	2375	59-67
30200	L/R 50x5,5x715	2500	68-73
30300	L/R 50x5,5x680	2500	72-77
30400	L/R 50x5,5x660	3000	74-79
30500	L/R 50x5,5x570	3000	86-92
30600	L/R 67x6,5x710	5000	125-132
30700	L/R 50x7,0x880	5000	142-152

* Remarks :

- Weight are based on usage elec. Operator.
- Only for door height between 2100-2250 mm
- For other door widths or heights use DOCO door processing!

Annex E

Hardware for Hoesch panel		W <2749 x H< 2440	W >2750<3999 x H< 2440	W >3999<5000 x H< 2440	W <2749 x H>2440<2850	W >2750<3999 x H>2440<2850	W >3999<5000 x H>2440<2850
Article	**Description**	**Pieces**	**Pieces**	**Pieces**	**Pieces**	**Pieces**	**Pieces**
25334	Side hinge	6	6	6	8	8	8
25333	Intermediate hinge	3	6	9	4	8	12
25008	Roller	8	8	8	10	10	10
25043	Top roller carrier	2	2	2	2	2	2
80612L	End cap 610 mm	see note	see note	see note	see note	see note	see note
80613L	End cap 488 mm	see note	see note	see note	see note	see note	see note
Hardware for Kingspan panel		**W <2749 x H< 2440**	**W >2750<3999 x H< 2440**	**W >3999<5000 x H< 2440**	**W <2749 x H>2440<2850**	**W >2750<3999 x H>2440<2850**	**W >3999<5000 x H>2440<2850**
Article	**Description**	**Pieces**	**Pieces**	**Pieces**	**Pieces**	**Pieces**	**Pieces**
25334	Side hinge	6	6	6	8	8	8
25333	Intermediate hinge	3	6	9	4	8	12
25008	Roller	8	8	8	10	10	10
25043	Top roller carrier	2	2	2	2	2	2
80612L	End cap 610 mm	see note	see note	see note	see note	see note	see note
80617L	End cap 500 mm	see note	see note	see note	see note	see note	see note

Hardware for Ryterna panel		W <2749 x H< 2440	W >2750<3999 x H< 2440	W >3999<5000 x H< 2440	W <2749 x H>2440<2850	W >2750<3999 x H>2440<2850	W >3999<5000 x H>2440<2850
Article	**Description**	**Pieces**	**Pieces**	**Pieces**	**Pieces**	**Pieces**	**Pieces**
25634	Side hinge	6	6	6	8	8	8
25633	Intermediate hinge	3	6	9	4	8	12
25008	Roller	8	8	8	10	10	10
25043	Top roller carrier	2	2	2	2	2	2
80612L	End cap 610 mm	see note	see note	see note	see note	see note	see note
80617L	End cap 500 mm	see note	see note	see note	see note	see note	see note
Hardware for Bremet panel		**W <2749 x H< 2440**	**W >2750<3999 x H< 2440**	**W >3999<5000 x H< 2440**	**W <2749 x H>2440<2850**	**W >2750<3999 x H>2440<2850**	**W >3999<5000 x H>2440<2850**
Article	**Description**	**Pieces**	**Pieces**	**Pieces**	**Pieces**	**Pieces**	**Pieces**
25734	Side hinge	6	6	6	8	8	8
25733	Intermediate hinge	3	6	9	4	8	12
25008	Roller	8	8	8	10	10	10
25043	Top roller carrier	2	2	2	2	2	2
80612L	End cap 610 mm	see note	see note	see note	see note	see note	see note
80617L	End cap 500 mm	see note	see note	see note	see note	see note	see note

Note for end caps :

- Depending of section height and section quantity.